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IV. THE VENONA BREAKTHROUGH

A. Arlington Hall in 1946

At the end of the war, the Signal Security Agency, with headquarters at Arlington Hall, became the Army Security Agency (ASA). Just before the renaming of the organization, Arlington Hall and all Army cryptologic activities worldwide were placed under the direct control of the Assistant Chief of Staff, G–2.[1]

Captain Bill Smith's Russian unit greatly expanded during 1945 and 1946. By April 1946, this unit, now known as WDGSS–93–B, had about 270 people, working Russian military, police, civil and Diplomatic systems, as well as the Bulgarian target. Perhaps a third of these people were directly involved in the Diplomatic (including Trade) problem.[2] Captain Smith's principal deputies, after Captain Ferdinand Coudert returned to law practice, were Dr. Waldo Dubberstein and Captain Oliver Kirby, both of who would follow him as head of the Russian problem. Smith, seriously ill, left the Army and ASA by the end of 1946. Dubberstein soon switched to the new CIA.[3] Oliver Kirby would play a very important role in the early Venona years, especially in matters of compartmentation, bringing the British into the problem and dealing with U.S. consumers. What came to be known as Venona would not at first be all in a single unit of 93–B. The veterans of the first three years of the Russian problem now found themselves in a variety of sub-sections, probably as a result of the general organizational upheaval of the immediate post-war years and the increased emphasis on the Russian problem. However, whatever the organization chart, the Russian Diplomatic problem was in practice worked as a single entity: current traffic logged and studied alongside the older and apparently vulnerable traffic. In those early post-war years, the people working the Dip problem undoubtedly expected to eventually read current traffic, with the older traffic providing the clues. In fact it would be the other way around: the older traffic would be entered, providing information of counterintelligence interest for the next 30 years. No U.S. to Moscow [redacted] amounts of the 1942–46 traffic.

The greatest effort at Arlington Hall and Nebraska Avenue went into Russian military, air and naval systems. As with the Russian Dip systems, the U.S. had high hopes for exploiting current material. In fact the breaks came quite quickly. Following is the status of work on these systems as of Oct 1946.[4] Thereafter, we will concentrate solely on the progress against Russian Dip and the Venona breakthrough, except to return to Russian service traffic in the context of the Weisband espionage case.

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[1] As we have seen, Carter W. Clarke, Deputy G–2 and head of Special Branch had, at least on high level matters, directed Army Comint programs and policy since 1942. During the late 1940s Clarke continued to do so. The post-war Special Branch, later called Special Research Branch, began publishing a Sigint Summary of Russian military activity in June 1947. Some of the officers associated with SRB included Lt Col.E.E. Huddleston, Colonel R.R. Klocko, Lt. Col. Peterson, Col. P.K. Porch [redacted] Many people appear two or even three times on the chart, working different analytic or staff jobs. The designator [redacted] was one of many during the later 1940s, when ASA seemed to reorganize every few months in keeping with demobilization on the one hand and new targets on the other as the Cold War set in.

[3] Oliver Kirby told me that he actually ran the Russian program from the later stages of Major Smith's tenure and during Dr. Dubberstein's brief period as nominal head of the program. Kirby officially took charge in September/October 1947 and stayed in that position until 1952. [redacted] and a consulting analyst with DIA from 1975–82. On 28 April 1983 he was indicted on charges relating to his sale of classified intelligence to Libya, directly and through Edmund Wilson (currently serving a life sentence). Dubberstein committed suicide the next day. CIA

[4] See the paper "Russian Systems", hand-dated 25 Oct 1946, IR# 8220, in the NSA Archives at CBNI 21. This is a survey of a type that would be continued at least to 1950—an overview of all Russian systems being worked. It was prepared by ASA and NSG and perhaps GCHQ.

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- Russian military systems included true one time pad systems and machine ciphers. The [redacted] cipher device was used for Russian army and navy high echelon traffic [redacted] as "the Russians are guilty of a number of security violations in the use of this machine [redacted] was also used for higher echelon traffic. The Russian [redacted] was used in the Far East for messages between corps and the military districts and to Army headquarters [redacted]
- High echelon Russian naval traffic was encrypted [redacted]
- Police (NKVD Border Guard) systems were also [redacted]

B. The Venona Breakthrough of December 1946

Meredith Gardner justly deserves the credit for the Venona breakthrough as the first bookbreaker and then translator of the [redacted] (KGB) traffic. He was the first to recognize the true nature of that material and issue intelligence reports. He found that the traffic contained covernames and that it concerned extensive Russian espionage within the United States. But again we must consider others who have a claim to the first entry into the system and recall the discoveries of Zubko and Grabeel; Lewis, Hallock, Feinstein, Elmquist, Bill Smith and Cecil Phillips, as well as those in Sam Snyder's unit who extracted clues from Japanese military attache traffic, perhaps giving the immediate inspiration to start the project and in any case to give Zubko and Coudert a good starting point. These cryptanalysts had made the fundamental discoveries about the pad indicators and the additive nature of the system, and they found the extensive matches in the traffic, including the KGB traffic, that made exploitation possible. Indeed from a cryptanalytic point of view, they made the real solution by solving the cipher system, or at least solving enough of it to point the way to everything else that followed. Mr. Gardner himself credits two others with the very first recovery of code group values: "Alice Joys first [redacted] bookbreaker; the second Marie Meyer (they found the code groups for months etc.)".[7]

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[7] Handwritten on an undated, unsigned notecard (but in Mr. Gardner's handwriting, though in two different pens—suggesting he added the reference to Miss Meyer later). Venona Collection, box D017, History of Exploitation folder. I do not find Miss Joys on the Russian unit organization charts of 1946; Miss Meyer appears on these charts as a linguist. Mr. Gardner also told me during several of our discussions that Joys and Meyer deserve credit.

Meredith Gardner (2nd row left): a typical analytic area at Arlington Hall in the 1940s.

Meredith Knox Gardner joined the Russian unit in October 1945 at the suggestion of Dr. Dubberstein. Gardner had received a Master's in German from the University of Texas and had been a PhD. candidate at the University of Wisconsin. While at the University of Texas he took private lessons in Russian from the Russian-born grandmother of a fellow student (this was in about 1937). From 1940 to 1942 he taught German and Spanish at the University of Akron. The academic dean at the university told him that the Army was interested in him because of his German language skills. He made some inquiries and the Army sent him some test materials and a short correspondence course in cryptanalysis. The Army offered him a position and he reported to the Signal Intelligence Service at the Munitions Building (just before the move to Arlington Hall) on 15 June 1942. In June 1943, he joined the Japanese Military Attache unit as a translator, remaining there until the end of the war (he had briefly studied Japanese at the language school at Arlington Hall—the faculty there was headed by Edwin Reischauer, later U.S. ambassador to Japan).[8]

At the end of the war he considered studying Chinese. Dr. Waldo Dubberstein, a colleague from the JMA problem, asked him if he knew about the Bourbon problem. When Gardner said he did not, Dubberstein told him it was the Russian problem and asked him to join the unit. He did so on 23 October 1945. Allowing for some administrative delays and private study of Russian, he was involved fulltime from January 1946. For the first few months he worked the Trade traffic [redacted] He later recalled that his first knowledge of the KGB traffic came about upon overhearing a small group of analysts, including Katurah McDonald and Freda Smyre, discussing a system they called JADE. They said, "that's the Russian secret police."[9] This is a minor historical mystery, for it suggests that someone, without any of the traffic being readable, had made the guess it was KGB. We don't know who that was, or how or why the finding was made—most likely it followed upon the analysis of Frank Rowlett's report of his interviews of Gouzenko, that is, the analysts now knew that at least one of the

[8] Interview of Mr. Gardner by Benson, 24 Sep 1991 and after. Mr. Gardner said that he also studied Hebrew while at the University of Texas in a course arranged by the Bnai Brith.

[9] Mr. Gardner repeated this story to me several times.

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Russian Dip systems must be intelligence service. But from the records, and most recollections, all we know for sure is that before Meredith Gardner's bookbreaking, JADE (which had many earlier names and which would become known as [redacted]) was considered a mid-sized Dip system, in third place after Trade and Consular, that seemed likely to be exploitable.[10]

Gardner began [redacted] bookbreaking in summer, or perhaps late Spring, of 1946. By that time about 2000 code groups had been recovered, though half of these were rated as doubtful. Recovery of these codegroups meant that key had been stripped off to reveal the underlying numeric codegroup. The frequency and placement of these codegroups would help in the bookbreaking, which had the objective of assigning actual values to the code group, i.e. the meaning the KGB gave in their code book (for example that code group 0950 = battleship). But only about 20 actual values had been assigned, by Alice Joys or Marie Meyer, or possibly by Dr. Burton Phillips, who did some key recovery on the early matches. Not enough and not the type of values to even hint at the meaning of a message.

The Venona files contain Meredith Gardner's handwritten account, probably written in mid–1947, of the progress of the bookbreaking up to March 1947. This will be attached in photocopy as an Appendix to some copies of this study.[11] The following paragraphs are drawn from that account, some verbatim though with most of the technical data excluded. While Gardner's account is in chronological order, he does not give the earlier dates, but rather refers to events or status up to or as of the summer of 1946 (sometimes he says July)—we may take that as the likeliest date for the beginning of his significant involvement.

[redacted]

[10] One other possibility—Mr Gardner could have combined two separate matters. He could have learned that Miss McDonald was heading the JADE effort, which was a Dip system, and also that the unit was exploiting NKVD systems. However, these were uniformed police/military systems, not secret police in the sense of KGB plainclothes operations.

[11] The handwritten original is in the Venona Collection in box D017 along with revisions and related material. Mr. Gardner's handwriting is quite legible—in any case I ruled out typing it because of problems of editorial selection and the frequent appearance of words spelled in the Russian alphabet (not transliterated).

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[redacted]

On or about 31 July 1946, Gardner made his first tentative translation of a phrase, in a KGB message NY —> Moscow, dated 10 August 1944, in which a phrase in the English language seemed to have been put in the Russian alphabet. Gardner suggested that it had the form:

D_F_NS W_ NOT WI_ WO_

He then assumed that the phrase was actually "Defense Will Not Win Wars" (the O in WO giving the sound of an A). Curiously, just as this first opening was made, Gardner was put onto another project (Bulgarian Dip) and the research was suspended from 5 August to 4 November 1946. Gardner did not fully translate this particular message until 1949 or 1950, when it was found to be largely concerned with cryptographic systems, [redacted]

During the first two weeks after Gardner returned to the problem on 4 November, he found 86 new values to put into the code book, meaning that by that date about 200 values (out of 10,000) were known.[13] The greatest single event of the Venona bookbreaking story came a month later, when, according to the daily log of Gardner's unit: "13 Dec 1946. Mr. Gardner has broken the digraphic code".[14] Gardner's own account, written a few months later, says that he made some important discoveries on 12 December, working with a message that seemed to have been partly written in English. [redacted]

[12] Message No. 1142, NY > M (external message number), in the Venona Collection, D014. Early versions of the translation can be found in the Gardner translation files, Vol I and the XY files. ALEKSANDR was involved in operations in or into Mexico—he or she was also supposed to [redacted]

[13] Gardner says he "assumed" 86 new values—as a book breaker he could not assign absolutely certain values until these had been tested in other messages. The assumption of meaning would be considerably more than a best guess but less than certainty (in the end he was right on 82 of these 86).

[14] The 'Green Book', a GPO Record Book that begins with an entry for 29 August 1946, and is particularly good for statistics, day by day, about matches, code recovery, assignment of values. Venona Collection, D017.

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Nonetheless, in those messages that could be matched, the parts in digraph code would prove exceptionally vulnerable. On 13 December 1946, Gardner made a translation of part of a 2 May 1944 message from the KGB New York to Moscow Center:

> **Your telegram (No.) 2108, first clause [unknown number of groups not recovered]. If the election were held today Roosevelt would probably obtain slender majority of popular vote but lose election due heavy concentration his vote in South where his big majorities count no more in final result than would simple 51(?) percent. We repeat [remainder of message unrecoverable]**

Gardner had broken into a part of the text of a KGB message that was sent in English, for, as later analysis and recovery would show, the New York Residency was sending Moscow the text of an English language note: "We are transmitting information written down by RULEVOJ after a conversation with ECHO." RULEVOJ would soon be identified as the covername for Earl Browder and ECHO the covername for Bernie Schuster, an agent in liaison between the KGB and the Communist Party USA (Schuster often ran investigative leads for the KGB—name checks, interviews). The message is of no counterintelligence importance, but it gives an interesting view of how the CP saw U.S. politics at the time (the message is very long and will be discussed again).

During 1947, Gardner continued to discover predictable groups, especially the rationale for the punctuation groups, and within a few years the bookbreaking had succeeded in the assignment of more than 8400 values out of the 10,000 in the book. Gardner accomplished this without ever seeing the actual code book or learning any of its values by any means other than analysis. The most famous Venona successes came from the exploitation of KGB communications encoded from this book. The term now came into general use to describe this about-to-be exploited KGB indicator system and code book. As we have finally reached the point of breakthrough, the following items may help to explain US–UK terminology and highlight the different Russian intelligence service codebooks.

The term

that had included ZZE, ZZF, ZZJ and ZDT. The term JADE, that preceded Venona, was more in the nature of a U.S. coverterm for the KGB code book rather than part of a As we have mentioned earlier, referred to the GRU system, and to GRU (Naval). For our purposes the different and code/indicator systems will not be explained here—the entry into these systems came later and the exploitable volume (on the US–Moscow lanes) was comparatively modest, though interesting. However, in the case of we need to differentiate between the systems:

- Meredith Gardner's bookbreaking was into Code 2A (JADE) a code book that the KGB's First Chief Directorate (foreign intelligence) had used from November or December 1943 to December 1945.[15] That code book spanned two different pad indicator systems, separated by the cryptographic events of May Day 1944, described earlier. The indicator system in use from 1939, or earlier, to 30 April 1944 is called the

[15] Other KGB directorates used this code too. It might be correct to say that it was used by the headquarters and worldwide elements of the KGB involved in intelligence, counter-intelligence, special operations and the security of Soviet missions and personnel abroad. In other words it was for the "plainclothes" elements of the KGB. The police, NKVD/KGB troops, concentration camps and the like used other code books, such as the often mentioned KOD 14.

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indicator system in use from 1 May 1944 [redacted]. Meredith was working [redacted] material: that is, the December 1943 code book as encrypted under the 1 May 1944 and after pad indicator system.

- The greatest number of Venona decrypts on the US–Moscow lanes are of messages dated 1 May 1944 through 1945, but especially for those last 7 months of 1944.

- A second grouping of KGB messages would be broken into later—in a second round of Venona exploitation beginning in the early 1950s. This involved what the US–UK called Code 1B, and which the KGB called KOD POBJEDA (Victory), a two-part (not in alphanumeric order) code book put into use in 1939 or earlier, and which would be replaced by the Code 2A book in Nov/Dec 1943. Because this book had gone out of service before May Day 1944, it had been encrypted only in pad indicator system [redacted]

- As stated, Meredith Gardner broke Code 2A through analysis without ever seeing the actual book. Book 1B (POBJEDA) was even tougher analytically because it was two-part. However, an unburned part of this book had been recovered by the Finns in the Petsamo trove of June 1941 (described earlier in this study). This book was not—for many years—recognized for what it really was, and did not come into play until [redacted] bookbreaking had already begun.

On 20 December 1946, Gardner broke part of another KGB message. This message, though the third one that he had partially broken, is sometimes considered the first message he solved and translated—probably because of the startling subject matter. This message, New York KGB to Moscow, 2 December 1944 concludes (the earlier part of the message was not cryptanalytically recoverable):

> **[someone] enumerates [the following] scientists who are working on the problem—Hans Bethe, Niels Bohr, Enrico Fermi, John Newman, Bruno Rossi, George Kistiakovski, Emilio Segre, G.I. Taylor, William Penny, Arthur Compton, Ernest Lawrence, Harold Urey, Hans Stanarm, Edward Teller, Percy Bridgeman, Werner Eisenberg, Strassenman**

This translation came to the attention of G–2, who wanted to know more.[16]

C. Covernames, the FBI and the British

Howard Barkey of the G–2 Special Branch (or Special Research Branch), the element of the War Department's Intelligence Division responsible for the analysis and dissemination of Sigint, learned about Meredith Gardner's successes quite quickly. While ASA was under and indeed a part of G–2, Barkey's interest caused some resistance at Arlington Hall. Meredith Gardner's notes from that time include the comment that, "H. Barkey hears of work, accuses G.(ardner) of withholding intelligence from G–2". Gardner later noted that he found Barkey's intense interest in his work appropriate though at the time he had mistakenly thought it, "premature and disruptive of the technical work."[17]

In late April or early May 1947, Gardner partially recovered two [redacted] messages from December 1944, that showed that the Russians had access to secret and top secret reports prepared by the Army General

[16] At least three early, though undated, informal translations of this message exist. The only formal translation, under the system we will describe later, seems to be GCHQ's 21 May 1952 version. Meredith Gardner's earliest versions are either in Volume II of his translations or in the XY folders; in one early compilation he merely gives a summary of this message. The concluding part of this KGB message will be discussed in the atomic bomb section of this study.

[17] See three handwritten papers prepared by Gardner in box D017, Venona Collection: 1. "Chronology", no date but probably started in early 1947. 2. untitled paper on compartmentation probably written in 1952, and 3. "List of Persons Known to Be Aware of [redacted] etc." probably written in 1954. Also Benson's interviews of Gardner.

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Staff. Gardner wrote out the first translation in longhand, one of the earliest original Venona translations that has survived.[18] In a 3 part message of 13 December 1944, KGB New York advised Moscow as follows:

To VIKTOR

. ROBERT has transmitted the secret document herein contained 'Postwar Troop Basis of the War Department' prepared by Division G–3 19 August.

The rest of the message consisted of row, column and heading indicators and the troop strength figures, as the KGB put this long Army document into a message. Covername MAJ signed the message.

Gardner's second decrypt and translation was of an 8 December 1944 message, New York to Moscow. This was another long message, quoting the top secret document, "War Department Troop Deployment, 1 Oct 1944" which, New York KGB reported, had been prepared by the Operations Division of the General Staff (G–3). Covername PILOT had provided the information to the KGB.

Howard Barkey took these translations to Colonel Carter W. Clarke, who was still assistant G–2. Major Pratt, another G–2 officer, located copies of the documents that ROBERT and PILOT had passed to the KGB and gave these to Gardner.[19]

In June 1947, Gardner wrote a short memorandum listing the covernames that he had discovered in the traffic.[20] Gardner wrote that, "due to inherent cryptanalytic difficulties the information is fragmentary and incomplete." He then listed 22 covernames, 20 on the New York to Moscow lane in messages that had been sent during 1944 and 1945, and two sent Canberra to Moscow.[21] He had no identities to go with the covernames, though he reported that true names of a group of wealthy Americans appeared in one message that also contained the covername NIK.[22] The message is important to counterintelligence chronology as it contains the first reference to the covernames of some very important KGB agents, e.g. covername RICHARD = Harry Dexter White, Assistant Secretary of the Treasury in the Roosevelt administration.[23]

Gardner's outline of covernames concluded that the Russian unit "is currently undertaking a careful search for covernames and names of possible agents", making it quite clear that the nature of the [redacted] traffic was now understood (as it probably had been since the atomic scientist message translation of 20 December 1946).

[18] Handwritten, no translation date shown but with the Category III codeword CREAM stamped on top and bottom—this codeword was in effect during 1947. Venona Collection, box D017. Later, revised translations are in the XY collection and the regular translations boxes of the Venona Collection.

[19] Ibid. Howard Barkey told Cecil Phillips (May 1992) that he could not recall Meredith Gardner or this situation—he recalled his liaison with ASA on behalf of Carter Clarke, but on other matters. We have looked outside NSA for the relevant G–2 records and do not know if they exist (the results of our outside searches for other G–2 records, e.g. counterintelligence, were not successful).

[20] Memorandum dated 20 June 1947, to AS–93, signed by Waldo Dubberstein, acting chief of the Russian problem. Venona Archives, box D017. No external distribution shown.

[21] Curiously, the list did not include covernames RULEVOJ and MAJ, found earlier.

[22] Gardner's first formal translation of this message is dated 19 October 1951—found in Vol I of the Gardner translations, Venona Collection, 3337, box 17 (which is different from the often-cited box D017), message no. 1015, NY > M, 22 July 1944. By 1951, Gardner had recovered more of the message and had discovered that several messages were contained in no. 1015 (which is the external number) and NIK had no connection to the true names- the latter related to an alleged investigation by the Justice Department of "representatives of corporations and their connections with German cartels", so reported covername PLUMB (LOT in Russian)—probably Charles Kramer, a KGB agent with good connections in the executive and legislative branches and the Democratic Party.

[23] In 1945, Elizabeth Bentley and Whittaker Chambers had told the FBI that White was a Soviet agent.

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On 22 July 1947, Frank Rowlett sent a long report on covernames to Colonel Hayes, chief of ASA (this report is essentially the same as the mimeographed "I.D. Special Analysis Report #1, Covernames in Diplomatic Traffic [redacted]", issued on 30 August 1947).[24] Rowlett noted to Waldo Dubberstein that an information copy of the report "may be given to Col. Klocko, but with the specific understanding that no action will be taken on it or the information contained therein." Colonel Klocko headed the Special Research Branch of G–2 (responsible for analysis and dissemination of Sigint).

On 1 August 1947, Colonel Lester R. Forney, chief of the Security Group of G–2, sent an informal note to Colonel Hayes suggesting the identities of six of the covernames mentioned in Special Report #1. None of thse turned out to be correct and the note contains one unfortunate juxtaposition—after listing tentative identifications alongside several covernames the note contains the suggestion that, "The following individual should be particularly watched for: Nathan Gregory Silvermaster (with aliases)—the cover name 'Sergey' may refer to him." The note then resumes commentary on specific covernames—the very next one being ROBERT, who turned out to be none other than Greg Silvermaster![25]

The sensational nature of this material was now apparent and Dubberstein and Kirby instructed Gardner to carefully control internal access to it. Chief ASA and G–2 also sought to control external dissemination. The 30 August (mimeographed) version of Special Report #1 showed, on the cover, distribution to the Navy and the UK Sigint Liaison Officer, Colonel Patrick Marr-Johnson.[26] However, Colonel Hayes sent his own copy of the report to Colonel Forney and suspended further distribution. But all copies may not have been recalled. When Gardner prepared the second Special Report, he put the same distribution list on it, but, "Colonel Hayes decided that until better control over access to the report was established, the transmission of the information in the report should be carried out by (Colonel Hayes), who was accordingly the only recipient."[27]

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[24] Two sets of Gardner's special reports on covernames are in box D017 of the Venona Collection. The 22 July and 30 August versions probably differ editorially, not in substance.

[25] Colonel Forney's note—unsigned, undated and without a heading, is with file of Gardner's special reports. The file also contains some G–2 reports on Max Elitcher, who appears in Venona in connection with the KGB's Rosenberg net. Meredith Gardner told me that G–2 identified Rosenberg before the FBI did (discussed below).

[26] The cover page shows Navy distribution as Chief OP–20–2 (the OP–20–G successor and NSG predecessor). Another distribution list, typed on a notecard, also shows OP–32–y, which I believe dealt in counterintelligence (ONI?).

[27] See the Special Report collection and Gardner's handwritten account of compartmentalization (cited above) [redacted] copy of Special Report #1 is in the Venona Collection, so I doubt it ever reached him.

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Colonel Harold Hayes

Not surprisingly, Carter W. Clarke would fix the matter of dissemination and put it on the right course—by turning the material over to the FBI for counterintelligence exploitation, circumstances we will shortly describe.

Gardner's Special Report #1 is 16 pages long, and probably contains all the covernames he had found up to that date. Almost the only identified covernames were those that had appeared in messages alongside the truename. Gardner quoted the recovered text from one such message (I have included more of the text than Gardner gave to give a better sense of the point he was making):

> **Please sanction bringing into our work MAMLYGA, Vitalij Semenovich (henceforth EM), a ship loading inspector in TYRE , former assistant political director of the SS "Budennyj". EM is being used by us in the party line on surveillance of people employed in loading ships....**[28]

TYRE was the covername for New York City. Therefore, the message gives the true name, Mamlyga, and his covername, EM. He was a Soviet citizen involved in the Lend Lease operation in the port of New York and the KGB had recruited him to watch Russians and Americans loading the ships. During the course of the Venona program, some important agent identifications, that would otherwise have been impossible, were made because the KGB gave true name and covername together in the same message—but our side had to break into the right message, that is the message where the covername was first assigned. This particular message, had no U.S. counterintelligence value as it dealt with a long departed Russian, recruited by the KGB for security countermeasures duties.

Gardner then gave a few pages to message addresses and signatures. He noted that the greatest number of New York to Moscow messages were addressed to VIKTOR (he had found 206 so far); a few were addressed to PETROV; some to organizations, especially the 8th Department. Unidentified covername MAJ (MAY) was the signatory for 160 New York messages.

Gardner then turned to the covernames, trying to find "families" of covernames or other indicators that might show some system to help in their identification. This would turn out to be elusive. Gardner showed that covernames could be divided into type—and once identification had been made, or the suspects narrowed down,

[28] No. 1206, NY —> M, 23 August 1944. The quote is from a 1954 translation—in Report #1, Gardner, using an earlier translation, has a shorter quotation.

then the covername might be shown to have some logic. On a very few occasions, such as where the covername sounds like the true name or perhaps gives (part of) the true name in another language,it could help make the identification. But even here it is not necessarily a decisive factor. Sometimes the covername showed disrespect or contempt, but the reason for that would not necessarily be clear, even after identification had been made. Gardner listed about 75 covernames under such groupings as Specifically Russian Christian Names, Christian Names Not Specifically Russian, Mythological Names, Names of Animals. He identified covername KOMAR (Russian for 'gnat') as Viktor Kravchenko, who had been with the Soviet Government Purchasing Commission before he defected to the U.S. in New York in 1944. Gardner did not explain how he made that (correct) identification noting only that, "For a complete development of this idea, a separate report would be necessary. [KOMAR] appears in 8 messages so far partly read . . .".

One of Gardner's comments is of great historical interest, because it is the first reference in the Venona papers to Julius and Ethel Rosenberg (not identified at that time, however):

> *LIB?? (Lieb) or possibly LIBERAL: was ANTENKO[29] until Sept 1944. Occurs 6 times, 22 October–20 December 1944. Message of 27 November speaks of his wife ETHEL,[30] 29 years old married(?) 5 years, "husband's work and the role of METRO and NIL."*

Gardner did identify the covernames used for some important placenames, for example, TYRE meant New York City, SIDON was London, CARTHAGE (KARFAGEN in Russian) was Washington. He quoted extensively from several messages that listed old cover name and the replacement covername, and a message that seemed to give an operational code for tradecraft terms—a single letter was to stand for a term, such as T = sound recording equipment, SH (transliteration of Russian letter) = cover.

Gardner concluded with the promise of more reports, for "in its present state the [redacted] traffic tends to arouse curiosity more than it does to satisfy it. This unsatisfactory state of affairs makes it imperative that this report be supplemented at intervals." He issued 10 additional reports on covernames from 26 September 1947 to 13 August 1948.

Before summarizing those reports, we need to consider what was not being done, and this goes back to the question of dissemination. Gardner did not prepare individual serialized Sigint reports of his translations. Mr. Gardner told me that in later years he did his own typing, turning out message by message translations. But in this earlier time he more often just used the message worksheets, that is he did his work directly on these large sheets of graph paper, designed specifically for cryptanalysis and translation during the war, from time to time summarizing these in his series of special reports. [redacted] Gardner explained to me that for a time he did not know who to send translations to, so he didn't prepare any, instead issuing Report #1 as a means of arousing interest in his project. Aside from the security considerations, and the unusual nature of the material, this probably makes sense. Message by message translations, issued one at a time to consumers might not have been very useful at the beginning of the Venona project. They would have been in rough shape and Gardner kept revising them on the worksheets. Some of the translations that could have been produced then would have consisted of

[29]Mr. Gardner told me that the appropriate translation was always ANTENNA, the ending KO that he used for awhile was "based on an erroneous recovery of the code group".

[30]Meredith Gardner told me that he had some difficulty breaking out this name which turned out to have the spell group for "THE" in the middle. It broke out as E THE L.

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(b)(3)-50 USC 403
(b)(3)-18 USC 798
(b)(3)-P.L. 86-36

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nothing more than covernames—no other confirmed text at all.[31] In any case, the special reports told a lot and certainly aroused interest. In any case the special reports told a lot and certainly would have inspired the consumer to ask for more and to sit down with Gardner and exchange views. That eventually happened.

Gardner's additional special reports, 1947–48 are summarized below. After Special Report #1, he did not number them; however, I have done so in the following paragraphs. Gardner's own titles for these reports follow my number:

#2 Additional Covernames and Related Information in Diplomatic Traffic, 26 September 1947. Covernames for Roosevelt and Churchill were reported—an important discovery which showed that a KGB covername does not mean that the person was a KGB spy. Gardner had also found covernames used for referring to members of the American Communist Party. He reported that he had found covername GOMER (HOMER) in a message as the source for intelligence on the Roosevelt-Churchill meetings in Quebec in 1944. Gardner gave two complete message translations, with footnotes: one concerned covername ANTENNA/LIBERAL (who had been discussed in Special Report #1) who would be identified as Julius Rosenberg. The second translation was of a message that contained instructions, including passwords, for a meeting in Hollywood with covername YUN.

#3 Names in [redacted] Traffic, no date, but early 1948. Here Gardner reported on traffic, in the KGB system [redacted]

#4 Messages in [redacted] Involving the Covername ENORMOZ and the Names of Nuclear Physicists, Etc., 22 April 1948. The transmittal page of this report was signed by LtCol Hugh S. Erskine. Frank Rowlett, apparently noting to Colonel Hayes, stated that "no distribution has been made of this information." In this report Gardner says that he had occasionally recovered the term ENORMOZ (ENORMOUS) in the traffic but not in any useful context. Gardner had now found the connection in a KGB New York message of 16 December 1944 (external no. 1773) where, wrote Gardner, "a man definitely connected with ENORMOZ is being talked about and then, after a gap of ten groups, there is talk of OPPENHEIM and KISTIAKOWSKI." Gardner said that in that gap—the unrecoverable 10 groups—there could have been a change of subject. But he doubted it. The full translation of the 16 December 1944 message indicated that New York was asking Moscow if they had any "intelligence on these two professors", i.e. Robert Oppenheimer and George Kiastiakowski. That clinched it that ENORMOZ = atomic bomb matters. Those professors had been mentioned in the message by truename.[32] Gardner gave four ENORMOZ message translations in Report #4. One referred to the work of LIBERAL (Rosenberg) and his group—New York was seeking Moscow's permission to have this group do some work on ENORMOZ.

#5 Covernames in [redacted] 21 April 1948. This report too was forwarded from LtCol Erskine, to Frank Rowlett, to Colonel Hayes. Hayes commented, "Further information along this line would be of great help to Security Group", that is to Colonel Forney. This report is one page long and Gardner's purpose was to show

[31] In our many meetings, I asked Mr Gardner about the absence of translations for 1947–48 (and it is difficult to identify many typed translations from before 1950). I wondered if he had made rough message by message translations, handwritten or typed in draft, that have been destroyed. More likely the story is as given above. I have been able to locate every document he described to me, so when Mr. Gardner says something never existed, I assume that is so.

[32] We will give a fuller, and the last revised, translation of this message in the section on atomic bomb espionage. Obviously this message is of interest to the Oppenheimer controversy, not least because it may suggest that as late as December 1944, the KGB in New York, at least the Residency, didn't know who Oppenheimer was and had not assigned a covername for him. To be discussed.

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that because of a Moscow–Canberra message of 26 June 1946, "the belief that the system [redacted] is a (KGB) system may now be regarded as confirmed."

#6 Covernames ANTENNA and LIBERAL in [redacted] Messages, 27 April 1948. Colonel Hayes noted to Frank Rowlett, "study was given to Col Forney who is taking action on information contained. Wants more whenever possible." In the first sentence of this five page report, Gardner drew attention to his earlier report on ENORMOZ and the messages that showed that, "an individual called LIBERAL was depicted as acting as an intermediary between a person or persons that had worked on ENORMOZ." Gardner then said prophetically, and I have added the emphasis, "so much can now be known about LIBERAL and his wife and friends that it would seem possible to identify him." Indeed it would have seemed possible, especially because of the following translation by Gardner of NY–Moscow, No. 628, 5 May 1944, that appeared in Report #6 (I'm quoting the version in #6, a later, formal translation will be found in Chapter XI of this study):

> **sketch of ANTENNA. He is 25 years old, a fellow countryman [Communist] .. lives in Tyre [NYC] . . . course at Cooper Union in 1940. He worked two years in a/the laboratory of the Signal Corps at Fort Mamot [Monmouth]. He was dismissed for past activity in a/the union. He has been working for two years at WESTERN ELECTRIC . . . .**

Actually, the foregoing message would later be understood to concern a sketch of Al Sarant by ANTENNA. The earlier partial recovery may have led the Bureau down the wrong path for a time. The identification of ANTENNA (and LIBERAL) = Julius Rosenberg is one of the mysteries of the Venona story. Meredith Gardner repeatedly told me that the identification had been made by G–2, well before the FBI, in 1950, officially named Rosenberg as the man. Here is what I have learned on this matter:

a. Meredith Gardner told me that he received a note, but he does not recall from who or the date, that stated that ANTENNA/LIBERAL = Julius Rosenberg. He is absolutely certain that Army G–2 was the source of that information. He received this information before he began the liaison arrangement with Bob Lamphere, FBI (19–20 October 1948) and he does not believe that he told Lamphere about this (assuming G–2 would have done so). He does not believe that he got the note directly from Colonel Forney, Howard Barkey or other G–2 representatives.

b. Oliver Kirby filled in the blanks. He told me that Colonel Forney, head of the Security Group at G–2, advised him that Julius Rosenberg was the culprit. Said Mr. Kirby: "I wrote a note to Meredith Gardner on a slip of paper. I said that Antenna/Liberal was probably Julius Rosenberg, per a source in G–2. This happened before the FBI made the identification."

c. Bob Lamphere told me that he didn't believe that G–2 had made the identification before the FBI.

Judging from the identifying information in the message, and the recollections of Gardener and Kirby, I believe that G–2 identified Rosenberg in 1948. I have no idea what happened next, or didn't happen, as the Bureau still carried ANTENNA/LIBERAL as unidentified as late as 23 June 1950.[33]

#7 The KOMAR (Kravchenko) Affair in [redacted] MESSAGES, 17 May 1948. Colonel Hayes again noted that "original copy delivered to Colonel Forney." This report contains the translations (some quite

[33] Colonel Forney and Carter Clarke had a long-time, friendly working relationship with Wes Reynolds, the FBI's liaison to G–2. It seems unlikely they would have concealed the Rosenberg information from the Bureau. By later 1948, Arlington Hall had given this message translation to the FBI, so the Bureau had the same basic information as G–2. A guess: the Bureau and G–2 simply didn't agree on the identification. I do not know what G–2 records might exist on this case—my searches for other Army CI records from that time were unsuccessful and I didn't pursue this one. I have not found Kirby's note to Gardner in the Venona papers and Kirby's own briefing notes do not show Rosenberg's name prior to the arrest.

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fragmentary) of 8 messages from 1944 that show that the New York KGB was trying very hard to get people next to Kravchenko and had succeeded to some extent. Kravchenko, as mentioned earlier, had defected from the Soviet Purchasing Group. One KGB message even mentioned the "Krivitsy Affair", but only in the sense that something about it might appear in a book.[34]

#8 Revised Translations of Two [redacted] Messages on Changes in Covernames, 4 June 1948. Gardner offered revised translations of New York KGB messages of 2 September and 5 October 1944 in which signatory MAJ sent Moscow a list of Moscow old and new covernames. Most of Gardner's report is a discussion of cryptolinguistic difficulties, for, he wrote, "the form that has been assigned to the various covernames is sometimes completely confirmed and sometimes subject to various degrees of uncertainty."

#9 The Covername KARAS in [redacted] Traffic, 9 June 1948. In this two page report Gardner presented two messages dealing with this covername. KARAS would later be identified as Ivan Subacic, a KGB agent involved in Serbo–Croatian matters in the U.S. and Europe.

#10 The Covernames TENOR, BAS, and CHETA in [redacted] Traffic, 8 July 1948. Covername CHETA (meaning the pair or couple and later having the Covername RIFFY, meaning reefs) would later be identified as KGB officers Nicholas and Maria Fischer. Gardner reported that the KGB wanted to get CHETA into Mexico via a U.S. transit visa. Covername TENOR/BAS, later identified as KGB agent Michael Burd, could help by getting the visas "the normal way". KGB New York offered Moscow two other options, including the use of an advisor to President Roosevelt, for around that advisor "is a group of his friends that will arrange any business for a bribe". TENOR/BAS had used this method in the past and has "already paid them up to $6000". [35]

#11 Revised Translation of Message on ANTENNA–LIBERAL'S Wife Ethel, 12 August 1948. Gardner's report, which contains a single translation—that of the important message of 27 November 1944, no. 1657, NY > Moscow—has a very important analytical comment on Ethel Rosenberg's involvement in her husband's espionage work. Quite simply, Gardner suggested that KGB use of a certain word for "work" may have had a conspiratorial meaning—work in the sense of "conspiratorial work in the interests of the U.S.S.R." and that the KGB message said that Ethel "does not work". (More of this later)

So, between August 1947 and August 1948, Gardner had put out 11 special reports containing the texts of several dozen messages and showing the exceptional scale of KGB operations in the United States just in 1944 (the most vulnerable traffic-year). From the first, these reports had made considerable impact in G–2. Carter W. Clarke had seen them. Probably after reading the first version of Special Report #1 (which was issued 22 July 1947), he called in S. Wesley Reynolds, FBI Headquarters, the Bureau's liaison with G–2.[36] Reynolds had been in that liaison position since early in the war and had known Colonel Clarke, and Colonel Forney of

[34] Colonel Krivitsky, formerly of the GRU and later the KGB had defected in 1937. He was found shot dead in a Washington hotel in 1941. We know that a number of Americans who later appear in Venona traffic were involved in the KGB surveillance of Krivitsy, e.g. covername STUKACH, who was Jack Katz.

[35] We will discuss this message in the section of this report concerning KGB/GRU attempts to get access to the White House. The advisor was David K. Niles.

[36] Interview by R.L. Benson, 18 August 1992 in Calabash, NC. Reynolds had joined the FBI in New York in 1941 after several years practicing law with his father and older brother. After a short tour with the New Orleans Field Office, he was assigned to Bureau headquarters. In 1942 he began his liaison with G–2. During the war he often met with Clarke, Forney, General George V. Strong and General Clayton Bissell (the latter two were Assistant Chief of Staff, G–2). Through these contacts he got access to the situation room of the Operations Division of the Army General Staff and, with Army approval, was able to give Director Hoover a daily military situation report (these in the form of "blue memos"—not for file and presumably long destroyed—that went eyes only to Hoover via Mickey Ladd). Reynolds had a role in the formation of the Air Force Office of Special Investigations shortly after the war, and in 1952 became the first professional head of the NSA Office of Security.

Clarke's Security Group, since 1942. Clarke asked Reynolds to obtain a list of all KGB/GRU covernames known to the FBI. He implied that the Army had made a break into the communications of those services.

Wes Reynolds, FBI liaison to Arlington Hall.

Reynolds talked to Mickey Ladd, head of FBI counterintelligence, about Carter Clarke's request. Ladd said it might be difficult to get Hoover's approval. Reynolds suggested to Ladd that he tell Director Hoover that ASA might have broken into Russian espionage traffic and that this would be of the greatest importance to the FBI. Then, and since, Reynolds believed that Clarke showed considerable courage—that he was taking a chance in revealing certain information to the FBI, probably without the approval of anyone senior to him.[37]

Hoover approved the request for information. Reynolds had expected that the FBI might be able to find a small number of covernames in their files, and was surprised to get a list of some 200. He delivered the list to Colonel Clarke on or about 4 September 1947.[38] The FBI listing is labelled "cover names", a term having different meanings. A few words on this:

• Gardner and his successors (U.S. and UK) used the term covername exclusively for the Russian concealment of true names in the Venona traffic. This was their translation of the Russian word for covername and in keeping with their (Gardner et al) understanding of Russian tradecraft. A covername, then, was used by the KGB (and GRU) in encrypted telegraph communications when referring to someone whose identity was to be concealed from, for example, code clerks.

• KGB and GRU agents, and officers had different operational names for their day to day intelligence activities,such as for meetings between the agent and courier. Those names might be called code names or (my suggestion) street names: in the Venona traffic, Elizabeth Bentley was known as UMNITSA (GOOD GIRL); but in meeting with her agents she was known as Helen. But a third element can appear, especially with illegals. The illegal would have: 1. a Venona covername, 2. a streetname such as Bill, and 3. an alias under which he lived and worked in open society.

[37] Clarke seemed to fear no one and never seems to have had much regard—from the standpoint of the intelligence business—for those above him in the chain of command. He was known to have made, and written down, less than complimentary remarks about Secretary Stimson, John J. McCloy, General Marshall, and etc. It is most ironic that Clarke was General Marshall's messenger to Governor Dewey during the 1944 presidential campaign. Almost needless to say, Clarke held no high opinion of certain occupants of the White House.

[38] That list, without letterhead or signature, is titled, "Re: Cover Names Used By Soviet Intelligence Services" and is dated 4 September 1947. A copy of this document is in the Venona Collection at 47–001 in the group of materials provided by the FBI, and later by CIA too, from 1947 to the late 1970s in support of the Venona program.

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The FBI list gave "cover name", true name, service (KGB, GRU), and dates and place of operation. The sources for this long list would have included Bentley, possibly Chambers, Gouzenko, Colonel Krivitsky, as well as names obtained from the British services. The list included names of people who had not operated in the U.S.—suggesting that the Bureau had culled their files for every concealed name they had (less some current cases, however, for there is no listing for Helen = Elizabeth Bentley). Many of these people, agents and officers, would later be identified in Venona, though I don't believe any were connected to the covernames that Gardner had been reporting in the series of Special Reports (e.g., the ENORMOZ–LIBERAL information was, at that time, solely available in Venona). The main importance of the list was to establish a partnership between Arlington Hall and the FBI.

During the next year, that is during the time that Meredith Gardner was writing most of his special reports, Wes Reynolds picked up Venona material, from Carter Clarke or Colonel Forney at the Pentagon, or directly from Colonel Hayes or Oliver Kirby at Arlington Hall. In their first meeting to discuss the project, Kirby showed Reynolds some decrypts. Reynolds asked, "Is that all there is?", to which Kirby replied, "We're just getting started.[39]

In return, Reynolds gave Colonel Hayes a series of reports in direct support of Gardner's operation. We probably cannot precisely date and account for all circumstances of the continuing development of the FBI–Arlington Hall relationship, but following are some documented milestones, based on the Venona records:

- An FBI blind memo of 24 May 1948 contains a tentative identification of LIBERAL (not correct, but of a person connected to Russian espionage).
- An FBI memo of 20 Sep 1948 deals with covernames HENRI, CHITA and TENOR (See Special Report #10 above)
- FBI memos of 26 July, 3 August, undated—but mid August, and 10 Sep 1948 discuss other Venona covernames.
- An FBI memo of 17 September 1948 discusses Joel Barr, making a tentative Venona identification.[40]
- A handwritten note by Colonel Hayes, on Special Report #11 says that he had given copies to the FBI (late Aug or early September). See also a note from Frank Rowlett to Colonel Hayes, 13 August 1948, in which Rowlett asks for information from the special Federal Grand Jury that had been hearing testimony from Elizabeth Bentley. Rowlett also asked for copies of reports of the House Committee on Un-American Activities. Rowlett noted that as [redacted] concerned the activities of the KGB, "any external material on the same subject is of potential value in recovering code text and code book values in this system."[41]

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[39] Kirby interview by Benson.
[40] Barr was one of Rosenberg's agents. He escaped to the Soviet Union but recently returned to the U.S. and was interviewed on television.
[41] This note is a bit curious—Rowlett does not mention the FBI but merely puts the need for collateral before Hayes. As we have shown, the FBI had been involved, through Colonels Clarke, Forney and Hayes, for almost a year.

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Bob Lamphere, FBI's link to Venona.

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During this time, Reynolds concluded that Venona liaison and analysis would be a fulltime job and that someone should be put at Arlington Hall for that purpose. Oliver Kirby also discussed that point with [redacted] a supervisor at FBI headquarters.[42] Mickey Ladd then selected Robert J. Lamphere, a CI case supervisor at Bureau Headquarters. Reynolds and Lamphere jointly visited Arlington Hall for a time, and Lamphere undoubtedly wrote the memos described above.[43]

On 19 October 1948, Reynolds and Lamphere met at Arlington Hall with Colonel Hayes, Frank Rowlett, Oliver Kirby and Meredith Gardner to formalize Bob Lamphere's connection to the Venona operation. On 20 October Lamphere and Gardner met privately to further discuss the matter. Over the next six years, Lamphere would be in continuous personal contact with Gardner and his immediate colleagues (e.g. the GCHQ Venona representatives) and would supervise the dozens of FBI espionage cases that grew out of or were guided by the information in Venona.[44] Lamphere, who, like Reynolds had joined the FBI in 1941, had worked counterintelligence cases (German and Russian) in New York City during the war years. After the war he transferred to Bureau Headquarters to supervise work on Russian satellite countries—he was happy to have the opportunity instead to work against the main target.[45]

ASA had been uncertain, after the breakthrough of December 1946, about the dissemination of the Venona material. Colonel Clarke had taken care of that as far as U.S. consumers were concerned. The matter of dissemination to the British, and a joint effort with them seems to have evolved along different lines, with some important practical decisions made at the working level.

During 1943 and 1944, Arlington Hall had, as a matter of official policy, not shared with the British the "fact of" the attack on Russian diplomatic systems. Likewise, the British had not shared information about their work, during that same period, on Russian illicit traffic (ISCOT) or their coverage from mid–1944 of Russian internal non-morse circuits. The Rattan/Bourbon understandings of 1945 would seem to have opened the way

[42] Kirby interview.
[43] Reynolds and Lamphere interviews.
[44] When I interviewed Bob Lamphere in December 1991, he said that he was certain that he had been in contact with Arlington Hall before October 1948 and had written a number of memos in response to Venona issues. On the other hand, Meredith Gardner did not recall meeting with Lamphere before the big gathering of 19 October. Wes Reynolds provided the explanation, which I have given above.
[45] Lamphere has told much of his story in his book The FBI–KGB War. The writing of that book is a story in itself. Admiral Inman, then Director NSA personally approved his use of limited Venona information in his book, notably the information that Julius Rosenberg had been identified through Venona.

for complete sharing of Sigint on the Russian target and for joint and cooperative operations.[46] But the chronology of the movement to a cooperative effort on the Russian Diplomatic effort is unclear. Perhaps the key factor is this: GCHQ had considered Russian Dip unreadable, as it was a one-time pad system. Therefore, if GCHQ learned about the Arlington Hall effort, before October 1945, from U.S. liaison officers Major Seaman, Captain Collins, Frank Lewis or Ed Christopher, it might not have been of immediate interest.[47] But the fact is, the U.S. had nothing to show in the way of decrypts and translations.

We do have a few milestones and events that suggest that the two centers intended to cooperate on Russian Dip. The experience of TICOM, Frank Rowlett's debriefing of Gouzenko, and the British revelations concerning (b)(1) certainly pointed in that direction. In early February 1946, GCHQ made available to Arlington Hall a collection of Dip (Trade) traffic that had passed on the New York <—> Moscow lanes from 24 Dec 1939–15 Jan 1940. The U.S. Bourbon papers for 1945–46, though only occasionally discussing Russian Dip, certainly do not suggest that this would be other than a cooperative venture.[48] An extensive liaison arrangement was in place by mid–1946[49]:

U.S. People at GCHQ

Grant Manson, Cmdr. USN. Senior USLO

Peter Belin, Cmdr. USN. Representing ONI and G–2

Prescott Currier, Cmdr. USN. Representing Navy cryptanalytic interests

Dale Marston, Major, USA. Assistant to Manson and ASA representative

Cecil Phillips, ASA civilian. Technical expert

Also, Colonel William G. Bartlett of G–2, Captain Charles Worley and Lt. Herman Schmidt of G–2 and Forrest E. Webb, Ensign USN, the cryptographic officer. Warrant Officer Bert Minnis and Miss Mary Goodman provided administrative assistance. Other U.S. people attached to the mission included Mack D. Jones, Major Kenneth Lynn and Mr. Stephen Wolf.

British Representatives in U.S.

Colonel Patrick Marr-Johnson, Senior UKLO

(b)(1)

Also Mr. Allan Berends, Mr. Freeborn, Miss Pauline Bamber, Miss Nina Edge, and Miss F. Browning.

[46] However, Oliver Kirby pointed out to me that the various agreements did not require the parties to share internal security/CI information.
[47] Cecil Phillips doubts that Major Seaman or Captain Collins knew that Arlington Hall had made a breakthrough in Russian Dip. But they did know of the existence of the Russian program—note their reference to "Bill Smith material" during the TICOM operation.
[48] See the Semimonthly Bourbon Reports, cited in the previous chapter.
[49] The rosters of liaison personnel are attached to a memorandum from Rufus Taylor, Cmdr. USN to Colonel Heckemeyer of Military Intelligence, 16 August 1946. NSA Archives, CBPB 61. These two officers were involved in U.S. Sigint consolidation planning and US–UK liaison matters.

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Cecil Phillips was assigned to GCHQ (then called LSIC) from late June to late December 1946. His general assignment was to study British analytic techniques in working the Russian problem. (b)(1) (b)(1) Nonetheless he gave at least one lecture on ASA's progress against Russian Diplomatic traffic. According to his recollections this did not arouse any particular interest. As we have said, GCHQ considered Russian Dip a true one-time pad system and therefore unbreakable. He also learned from Brigadier John Tiltman that in any case very little Russian Dip was on hand at GCHQ—Tiltman had ordered the material destroyed because it could not be solved. The point here is that the U.S. learned very early on that the British did not have much traffic, at least not the potentially vulnerable (KGB) on the London <—> Moscow lanes. Cecil reports that Brigadier Tiltman repeated this "confession" to him a couple times thereafter. [50] Cecil's recollections provide some important time frames and perspectives, especially because of his close, hands-on connection to the Russian Diplomatic problem. For he recalls that when he went to the UK in June 1946, the Russian unit at Arlington Hall did not know that the ystem would soon prove to be KGB traffic—in other words the Russian Diplomatic traffic, though in several different systems, was still thought to be just that (or perhaps we should say that, given the Gouzenko disclosures, GRU traffic was expected, but not yet found, in the Dip). When he returned to Arlington Hall at the end of December 1946, Gardner had made his first breaks into Therefore, when Cecil briefed the British on the Russian Dip problem he was not yet able to say what had been found in that traffic.

GCHQ revealed to Cecil Phillips that they had been working Russian illicit traffic since 1943 (ISCOT). He sent a set of ISCOT papers back to ASA—month by month summaries of the links that had been covered, status of decryption and, later, the many hundreds of translations that showed the extensive Russian control of Partisan and intelligence-gathering networks in wartime occupied Europe.[51]

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(b)(3)-18 USC 798

[50] Cecil Phillips prepared a paper on this subject, "Recollections of British Liaison", 26 March 1992. Yet another go at the missing UK <—> Moscow traffic: a.) On 5 August 1945, Major Seaman had cabled Arlington Hall that the British had only a few months worth of Russian Diplomatic on hand (actually much less than that). b.) On 8 August AH proposed sending Seaman Russian Dip materials for discussion with GCHQ. c.) In October 1945, AH representatives briefed UK liaison officer John Cheadle about the U.S. work on Russian Dip. Therefore the traffic must have been destroyed before Aug–Oct 1945. As we shall see, KGB agent Bill Weisband arrived at Arlington Hall in about October 1944 and toured the Russian section soon thereafter. He began working in the Russian section in about January 1945. If the KGB's assets in the UK services were in position to influence, recommend, or require the destruction of Russian traffic, then we may point to Bill Weisband as the person who could have told the KGB that some of their traffic was breakable.

[51] These papers, including the translations, are in the Venona Collection, box D050. These are historically important, giving us some idea of the secret information available to the British government during 1943–45, information that must have influenced certain strategic views about the Balkans and about Russian post–war plans. Apparently the U.S. did not know about the ISCOT source until mid–1946.

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[redacted]

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While I have not found the ASA records [redacted] (b)(1) in his study of Venona reports that as early as 5 September 1945, Genevieve Feinstein, Lt. Hallock and Cecil Phillips had briefed UK liaison officers, John Cheadle (assigned to Arlington Hall in April 1944, replacing Major Geoffrey Stevens) and [redacted] b 1 about Arlington Hall's work on Russian Diplomatic.[52] That meeting would have been in the spirit of full sharing under the new BOURBON program. Cecil Phillips work at GCHQ during 1946 was to have built on that. We rely on [redacted] (b)(1) for the next developments:[53]

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> *No evidence has come to light to show the origin of the idea of integrating a member of GCHQ into the (ASA Russian Dip) party, but negotiations must have proceeded apace as a note of 30 December 1946 from the Director GCHQ to Colonel Marr-Johnson, the senior GCHQ Liaison Officer in Washington, stated that Philip Howse could be released for the proposed integrated post, the first in the history of (U.S.–UK) relations. The offer was accepted by Colonel Hayes (chief of ASA) and Howse arrived in Washington on 5 May.*

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Mr. Howse, an experienced cryptanalyst would play an important part in the Venona story, and his reports to GCHQ are an important historical source, all the more so because ASA policy/administrative records for Venona are so meager. It is often from Mr. Howse and his successors that we learn what Arlington Hall is doing. The date that Mr. Howse started on Venona is uncertain—Cecil Phillips reports that he arrived in the U.S. in January 1947 (see above where (b)(1) gives the date 5 May). Meredith Gardner's handwritten chronology of the early Venona milestones suggests that Howse joined the Venona effort in October 1947 (at any rate, a date after 4 Sep and before 17 November):[54]

> *Mr. P. Howse comes to work in the section. He at first familiarizes himself with all the systems, but seeing the value of the Canberra [redacted] material, asks permission to transcribe the best solved messages for (UK). Visit of Brigadier Tiltman.*

Gardner's entries for 17 November and 9 December 1947 continue his account of Howse's integration into Venona:

> *Mr. Howse (not yet fully involved) in [redacted] work. Solution of the new book [redacted] begins. Long messages (quoting documents) Canberra–Moscow identified by (GCHQ). Documents are used as cribs by Gardner and Howse; H. henceforth concentrates on [redacted] Canberra.*

Most likely, Mr Howse spent many months touring Arlington Hall, even writing some papers on Russian Diplomatic during that time. But he probably didn't settle into [redacted] full-time until the Fall of 1947.

As we have seen earlier in this section, Colonel Hayes had ruled that he alone would disseminate Meredith Gardner's special reports, and while Special Reports #1 and #2 had originally shown Colonel Marr-Johnson on the distribution list, either these were pulled back, or the distribution was not made at that time.

Almost certainly, the ASA leadership and successive heads of the Russian unit were not entirely current on the extent of British integration into the Venona problem. Mr. Gardner was told to withhold Venona information from the British (and from the Navy and then from the new CIA), but, with Mr. Howse working on the problem, this would have been rather difficult.[55]

In the following paragraphs are some of the highlights of the early movement (1947–1948) toward complete cooperation. These are drawn more from UKLO than from ASA records, and, I think, show that the two centers worked together at a reasonable pace, driven by two major finds in the traffic and the mutual need for collateral: first, the discovery that back and current KGB traffic to and from Australia could be exploited; and second, the discovery that the KGB source with the covername "G" and sometimes HOMER or GOM(M)ER had been passing important British documents in Washington, in 1945.[56] To put the following in context, we recall that Meredith Gardner's Special Report #1 was issued on 22 July 1947 (original with carbons) and 30 August 1947 (the mimeographed version that Gardner intended to release to Colonel Marr-Johnson).

[54] Handwritten paper headed "Chronology", no signature but written by Meredith Gardner during the later 1940s , with a couple updates from 1951, 1952 and 1953. In the Venona Collection, box DO17.
[55] Benson interviews of Mr. Gardner.
[56] These UKLO and GCHQ papers are in the NSA Venona Collection—in some cases complete sets of certain series.

IV. THE VENONA BREAKTHROUGH

• 15 May 1947 Robert R. Jackson, for the SLO to GCHQ. Howse had asked Jackson to ask GCHQ for collateral on Australian personalities and organizations to help identify KGB covernames in 1945 Canberra <—> Moscow traffic. Jackson/Howse attached translations.[57]

• 9 June 1947, a study by Howse titled, "Russian Diplomatic Pad Additive Systems", one of the most important papers for the history of Venona.[58] Howse reported that [redacted] was the "System for reporting intelligence, NKVD ?" and that significant matches had been found of [redacted] with [redacted] and [redacted] with Trade traffic. Moscow–Canberra [redacted] up to 12 April 1947 could be matched. Howse continued that, "The [redacted] code is used for reporting intelligence gleaned by agents, and gives covernames etc." and that it could be or would be exploitable. Interesting to note, Howse gave the ASA Venona section's order of battle at that time: Raymond Van Houten as the chief; Meredith Gardner and Samuel P. Chew as the bookbreakers; Burton Phillips and Cecil Phillips doing the Trade indicator study; Richard Hallock, Tom Waggoner, Ruth Jache doing the additive study—a total of 66 ASA people working Russian Dip.

• 11 July 1947. Commander Travis, Director of GCHQ asked the Senior Liaison Officer for more information. Interest at GCHQ was "particularly stirred" by Howse's statement that the [redacted] code concerned Russian intelligence operations.[59]

• 6 August 1947. Howse replied to GCHQ with a paper assessing the "production potentialities" of [redacted] (Trade) and [redacted] (Consular). He reported that hundreds of Trade messages of the period 1939–46 were readable and could be published—but they had no intelligence value. Howse noted the value of using the Trade to find matches with the systems expected to contain useful intelligence. He reported that no [redacted] messages were as yet "sufficiently complete for publication of texts", but that of these, between 150 and 250 New York to Moscow messages would "become sufficiently readable for publication, commencing within 3 months, completion possibly within 12 months." While Howse was over optimistic, this report certainly suggests that he was familiar with Gardner's work. He concluded that of the 53 available Canberra <—> Moscow messages of 1945, about half of these would be publishable, but not for 6 months as the New York <—> Moscow had the higher priority. The current Canberra <—> Moscow traffic, was being matched and required more study.[60]

During early October 1947, GCHQ sent a series of messages to their SLO in Washington containing information on Australian–related personalities and organizations.[61] The management of the ASA Russian unit took notice of the need for ASA–GCHQ cooperation in Venona (which had been going on at the Gardner–Howse working level anyway). In an internal paper of 24 October 1947, LtCol Erskine (Oliver Kirby's boss) wrote:

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(b)(3)-18 USC 798
(b)(3)-P.L. 86-36

[57] KON 94, Venona Collection, box D017.
[58] KON 103, Venona Collection in box 5 of the 2779 group (the latter having been the safe number in the Venona section of A group). This paper gives an excellent account of the state of the ASA Venona program as of that date.
[59] In Venona Collection, 2779/box 5. The version of this communication in the Venona Collection looks like a re-type of a message—put into note form with the block initials (no script) E.W.T. (Commander Edward W. Travis)
[60] KON/119 with attachment, in Venona Collection, box D017.
[61] These messages and the other GCHQ papers that are referenced in this section are in (mostly) 2779/Box 5 of the Venona Collection.

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> ***It is considered desirable to apprise the British that the Canberra–Moscow [redacted] traffic of early 1946 consists largely of two long part messages apparently transmitting 'documents'..... It is pointed out that Mr. Philip Howse is working on the Russian diplomatic additive problem, but has not yet been advised of any significant material that has turned up. Continued efforts are being made by Mr. Gardner to develop overlaps and read all parts of both messages. But considerable effort and time could be saved if the documents in question could be obtained.....It is requested that instructions be given as to the handling of this information.***[62]

Four days later SLO Washington advised GCHQ that, "Mr. Meredith Gardner and Philip Howse have uncovered fragments of the texts of two series of [redacted] messages which appear to be extracts from a publication issued by the British War Office." He went on to say that he been asked (by ASA) to bring this to GCHQ's attention, "with the view to investigating the possibility of a copy of the original document being made available to the [redacted] party."[63] GCHQ replied to Colonel Marr-Johnson on 17 November: "Papers have been traced and are being forwarded forthwith. Wonderful job." After which Robert R. Jackson, for the SLO, reported to GCHQ that with the original documents to use as a crib, "Mr. Meredith Gardner is having an exciting cryptanalytical task of group-recovery" and would be issuing for GCHQ's information, "a complete record of the cryptanalytical results achieved directly from the material which you have placed at his disposal."[64]

In Chapter VI. we will continue to trace the development of Gardner-Howse and ASA–GCHQ collaboration on Venona, in which the next major developments would include the G–HOMER case and the sharing of all texts of KGB messages, regardless of the country involved.

At this point it remains to mention the ASA connection (if such it could be called) to Navy and CIA regarding Venona.

Arlington Hall adopted a very cautious, if somewhat erratic, attitude toward Navy involvement in Venona. Meredith Gardner received instructions that when meeting with Navy about Russian Dip (certainly the Venona part of it), he was to put them off. In a meeting at Arlington Hall on 10 June 1947, between ASA and NSG (then called CSAW), the former seem to have hoodwinked the latter. The parties agreed that while some current matches had been made, "unless the method for key generation were discovered the intelligence derived from the traffic would be subject to question and incomplete since it would be based only on depths of two." Frank Rowlett proposed, therefore, that the Navy should study key generation—the Navy said they'd think about it. The ASA delegation seems not to have mentioned that Meredith Gardner was already reading parts o[redacted] messages and that the depth of two problem was no longer the principal issue: bookbreaking was already in progress. However, three NSG cryptanalysts later worked o[redacted] (but not [redacted] at Arlington Hall.[65]

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[62] Interoffice memo, subject [redacted] messages. Venona Collection, box D017.
[63] KON 137, 28 Oct 1947.
[64] KON 147, 9 December 1947.
[65] See "Digest of Discussion on Bourbon Diplomatic Problem, 10 June 1947" signed by Lt.Frederic J. Bright as recorder and addressed to the Chief of the ASA Operations Division (Frank Rowlett) and NSG's Director of Processing (Captain Dyer) in NSA Archives at CBNI 21. Cecil Phillips recalled the three NSG people workin[redacted] Mr. Beecher Thornton, and two others.

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A year later, Captain Rufus Taylor, a Navy Sigint veteran then heading OP32Y1, the Joint Counterintelligence Information Center (within ONI) asked ASA for access to [redacted] material. The reply signed by Colonel Hayes (9 Sep 1948) was astonishingly forthright. Hayes explained that Taylor would have no use for [redacted] as it was old Trade material which was, however, "of technical interest (to ASA) since it provides a foundation for [redacted] diplomatic systems", while [redacted], which he said was a KGB system, "can be made available to your office on a continuing basis." Hayes then gave the security conditions for access, and said that as the decrypts were based on two-deep overlaps, ASA could not "vouch for the absolute reliability of any [redacted] translations." He concluded that if his restrictions were acceptable, then a single copy of each [redacted] anslation would be delivered to Commander Tenney.

Captain Taylor set up acceptable procedures for access and handling, and on 6 October 1948, Commander Tenney received 11 reports from Meredith Gardner (the eleven special reports that Gardner had written between July/Aug 1947–Aug 1948). Fourteen Navy (ONI), Army and CIA people in Captain Taylor's Joint CI Center were given access to the material. Bill Harvey of CIA, previously of FBI, was in this group (Harvey was later involved in the Berlin Tunnel operation and has become a well known figure in books about espionage).

On 1 February 1949, Captain Taylor wrote to Carter W. Clarke, who had become chief of ASA a few weeks earlier, asking for mor[redacted] material, as he had not seen any since the original batch of special reports. Clarke could not have been pleased. On the bottom of Taylor's memo he wrote a note to Colonel Hayes (who was still at Arlington Hall though replaced by Clarke): "What is this all about?" We don't have the answer, but on 4 February Clarke wrote to Rufus Taylor, that there were "no reports produced on subject material subsequent to those you received on 6 October 1948. It is considered unlikely that further written reports will be produced from this source."[66]

We now turn to a summary of early CIA access to Venona. The CIA people in Captain Taylor's joint unit who gained access to Meredith Gardner's eleven special reports were: Harvey [redacted] These special reports did not contain any information known at that time to relate to OSS, the CIA ancestor. But as Gardner broke into more messages, and the FBI began to provide analytic and investigative assistance, OSS personalities were found in the traffic (we recall that Elizabeth Bentley had identified a number of OSS people as KGB agents). When ASA made a routine name/document check at CIA in 1949, as part of the search for collateral and context, the CIA's attention was caught by one of the names: an OSS type still in the business.[67] [redacted] of CIA "then asks for all OSS mention in traffic, but is put off."[68] Gardner continues the story:

> *No satisfactory way to channel later (that is after the special reports) specific information to the proper place in CIA existed, however, until 1952, when with the help of* [redacted] *by now with CIA, direct liaison between Gardner and* [redacted] *of CIA was arranged for and the security of* [redacted] *material at CIA was taken care of.*[69]

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[66] All these papers are in Oliver Kirby's briefing folder, box D017, Venona Collection.
[67] Name withheld—irrelevant to the Venona story; an innocent bystander, I believe.
[68] Gardner's handwritten "Chronology" cited above. Venona Collection.
[69] Gardner's handwritten paper on early compartmentation of Venona. Cited above. Venona Collection.

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A final word on the problem of how to control and disseminate the Venona material. Oliver Kirby believed dissemination should be limited to G–2 and the FBI, and, acting under Carter Clarke's orders he had taken certain measures in that regard. Finally, and this could have been in March 1948, Clarke sent him to see General Omar Bradley, the Army Chief of Staff, to brief the General on the program and seek his guidance on dissemination. General Bradley told Kirby to limit dissemination to G–2 and the FBI.[70]

[70] Kirby interview. It is difficult to date the Kirby-Bradley meeting. Mr. Kirby told me that he thought it took place in March 1949, but that must be too late and I have made it 1948. Kirby and Clarke gave a number of other briefings too, including to at least one member of Congress and to the publishers of two important newspapers (none of this involves Senator Joseph McCarthy, however).

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V. RUSSIAN DIP 1945–1949: THE PROCESS AND THE PEOPLE

A. Overview

In the previous chapter we emphasized the bookbreaking work of Meredith Gardner. In this chapter—based on a paper written by Cecil Phillips—we review the entire analytic process, for many people did a lot of difficult work before a message could be turned over to Meredith.

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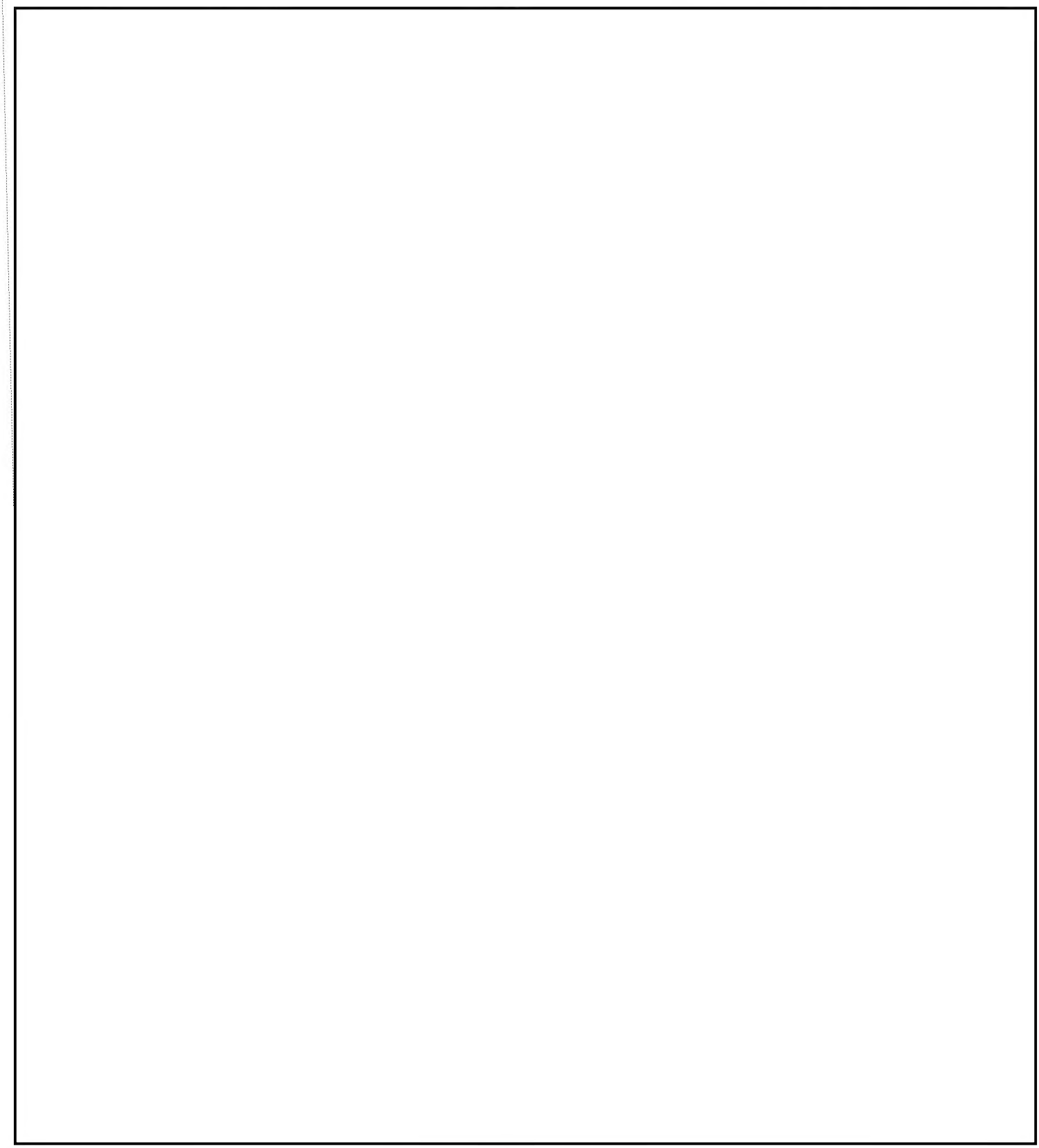

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6. The Players in the Code Reading Game

Throughout the life of the [redacted] problem except for the final three or four months, Gene Grabeel was the major player in the reading of [redacted] texts. At various times she supervised all the readers and at other times simply supervised part of the [redacted] problem and all the new people arriving as readers on the problem. From about April 1945 until 1947 she served as assistant to Dr. Chew who came to the problem as a very senior cryptanalyst/reader from the Japanese problem. In this role she helped him make important discoveries about the nature of some of the most stereotyped [redacted] text and directed a number of junior readers in the application of Dr. Chew's discoveries. Later, she was assisted by Eleanor Bledsoe, Capt. Van Houten (who served briefly as section chief under Mr. Dubberstein), Joan Malone Callahan, Virginia Taylor Lowe, Janice Jayne Cram, Phoebe Craven and others.

From the very beginning in November 1944 when she found the first [redacted] depths until she left in the 1950's, Hannah Katurah McDonald led most of the reader effort on [redacted] even though Miss Malone (Callahan) and Mr. Gardner were primarily concerned with the bookbreaking, translation and publication of results (or direct interaction with consumers). Miss McDonald led a group of 4 to 8 readers who did most of the work of placing the code groups in the depths, but they also had considerable input from Miss Malone and Mr. Paul Gerhard. Among the people who worked with Miss McDonald, Mrs. Ruby Johnson Sommers was widely recognized as one of the most productive readers but she was not believed to have any command of Russian beyond the most rudimentary knowledge. Part of this success was clearly her speed in making code trials in the depths, but the rest has to be attributed to a remarkable memory for the [redacted] —or better knowledge of Russian than she ever admitted. If the latter was true, it was acquired while working on the problem because she came to Arlington Hall directly from a small Virginia high school.

E. Bookbreaking and Publication

Strictly speaking, bookbreaking—perhaps more properly called "bookbuilding" as GCHQ does—is the process of determining the meaning of a code group. In the case of the [redacted] depths because there were only two messages in depth, the bookbreakers or other Russian language personnel had the additional task of confirming that for each appearance of the code group the meaning assigned made sense—and that the text in the other message of the depth made sense. If both conditions did not prevail, either the code group or the assigned meaning or both were almost certainly wrong—or at least questionable. Since there was a wide range of language knowledge among the depth readers and since every depth was worked and reworked over many years, almost anything in the overlaps was checked and rechecked—including final checking by the most senior bookbreaker linguist before any translation or publication was made.

The final authority for [redacted] bookbreaking was Meredith Gardner throughout the late forties and he continued as such until he retired in the 1970's. He also made the earliest translations and summaries of content—those made at the end of 1946 and during 1947. From about 1950 on, many of the translations were made by UK personnel, starting first with the integrees and [redacted] (b)(1) [redacted] (b)(1) Throughout much of the period of the late forties, Meredith was

assisted by Paul Gerhard and Joan Malone Callahan—both of whom were excellent depth readers and quite knowledgeable of [redacted] texts, but not expert in, the Russian language. In the very earliest days of the problem, Miss Marie Meyer, a language scholar out of the University of Chicago and others either did bookbreaking or made suggestions for code group meanings which were later confirmed by Meredith Gardner's work.

On the [redacted] problem there was probably much less concern about the bookbreaking because it was clear that there were not likely to be translations or publications. Miss Meyer also did bookbreaking on [redacted] along with Dr. Chew, Joan Malone, Phoebe Craven, Mrs. Floy Doyle and some others who only stayed for a short time. After the creation of AFSA in 1949, Charles Condray, who had been with Naval Security Group, became the senior linguist on the [redacted] and probably did most of the bookbreaking—with help from GCHQ.

F. Summary

All of the bookbreaking effort applied to the [redacted] problem from the beginning in 1943 until 1950 probably amounted to less than 5% of the total effort expended on the US side of [redacted] In contrast, the reading effort probably accounted for about 75% of the effort expended. A very rough estimate of the amount of this effort over the nearly forty years of the problem suggests that as much as one man year was expended for every unique translation made. Code group recovery throughout the period may have amounted to as many as 25,000 groups—which might mean a recovery rate of about one group every ten days.

(The figures in the summary are rough estimates. The number of groups recovered could be derived more accurately, but the bookbreaking manpower would be hard to derive. In making this estimate it is assumed that 100 man years of bookbreaking, or 2 1/2 people over the full forty years were involved.)

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